

**(19) World Intellectual Property Organization**  
International Bureau



**(43) International Publication Date**  
16 June 2005 (16.06.2005)

PCT

**(10) International Publication Number**  
**WO 2005/054058 A1**

**(51) International Patent Classification<sup>7</sup>:**

**B65B 31/04**

**(81) Designated States** (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

**(21) International Application Number:**

PCT/IL2004/000830

**(22) International Filing Date:**

9 September 2004 (09.09.2004)

**(25) Filing Language:**

English

**(26) Publication Language:**

English

**(30) Priority Data:**

10/725,007 2 December 2003 (02.12.2003) US

**(84) Designated States** (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

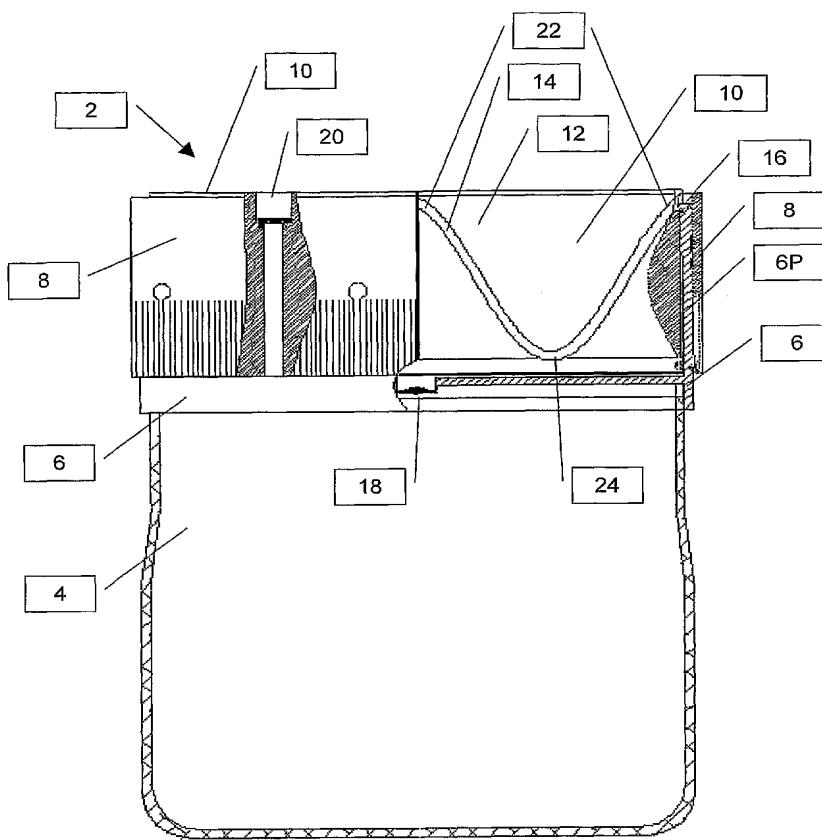
**(71) Applicant and**

**(72) Inventor:** HAIMI, Shlomo [IL/IL]; Balfour 641/10, 30600 Or Akiva (IL).

**(74) Agent:** FRIEDMAN, Mark; 7 Jabolinsky St., 52520 Ramat Gan (IL).

[Continued on next page]

**(54) Title:** PUMP BOTTLE CAP



**(57) Abstract:** A container lid assembly (2) that includes an integral pump (6P) so as to create pressure differential within a container. This pressure differential may be lower than atmospheric pressure so as to be at least a partial vacuum within the container. Alternatively, the pressure differential may be a state of higher than atmospheric pressure within the container. There are several features of the present invention that can be used in synergy, but are of value when implemented separately. These features include a pump configuration (120) that activates the reciprocating linear motion of the piston (10) by the rotational movement of a pump actuating element; a contents-dispensing mechanism (150) for removing contents from the container while maintaining the at least a partial vacuum within the container; a vacuum indicator; and a filter configured to filter the gases entering the pump from the interior of the container.



**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*